

Fort Hood Semi-Annual Weather Briefing

SUMMER TRANSITION SEASON



**3d Weather Squadron
(3 WS)**

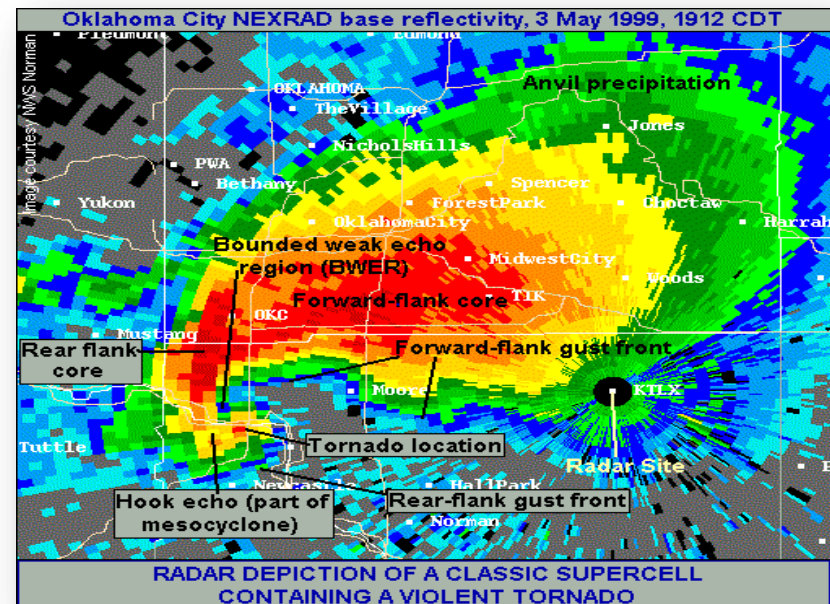
Updated 16 Oct 2013



OVERVIEW



- ➡ Local Area Influences
- ➡ Summer Climatology
- ➡ Hazards
- ➡ Training Areas
- ➡ Watches/Warnings/Advisories
- ➡ Weather Operations
- ➡ POCs





Summer Synoptic Pattern



- ➡ Marked by the northward movement of the Bermuda High
- ➡ Few true frontal passages with the Polar Front Jet remaining well north, keeping region hot & humid
 - Few that do pass are weak and mainly affect the panhandle region
- ➡ Most weather associated with Gulf moisture, dryline--“Marfa Front”

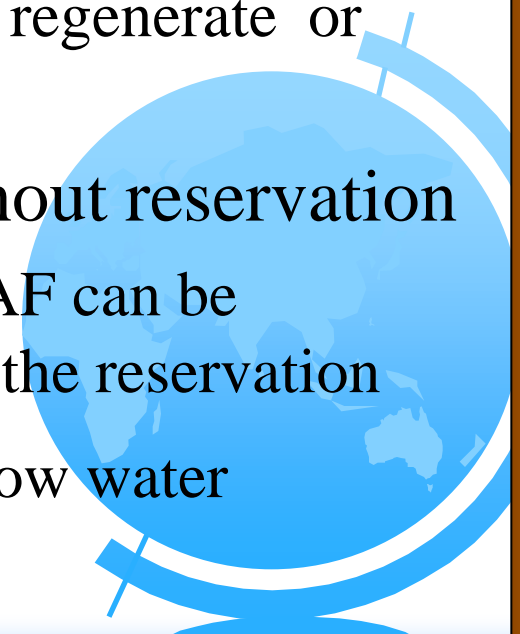




Local Area Influences

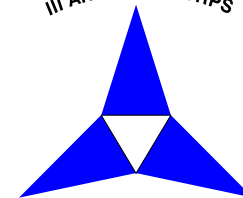


- ☞ Rolling hills with peaks up to 1,500'
- ☞ Large lake areas and abundant foliage
 - Act as moisture sources for thunderstorms and fog
- ☞ Flat basin surrounded by hills
- ☞ “I-35 Rule” - Storms dissipate over us; regenerate or intensify east of I-35
- ☞ Isolated weather conditions throughout reservation
 - What looks good at RGAAF and HAAF can be different on the north and east-side of the reservation
- ☞ Low river crossings, hard ground, low water retention causes flash flood situations

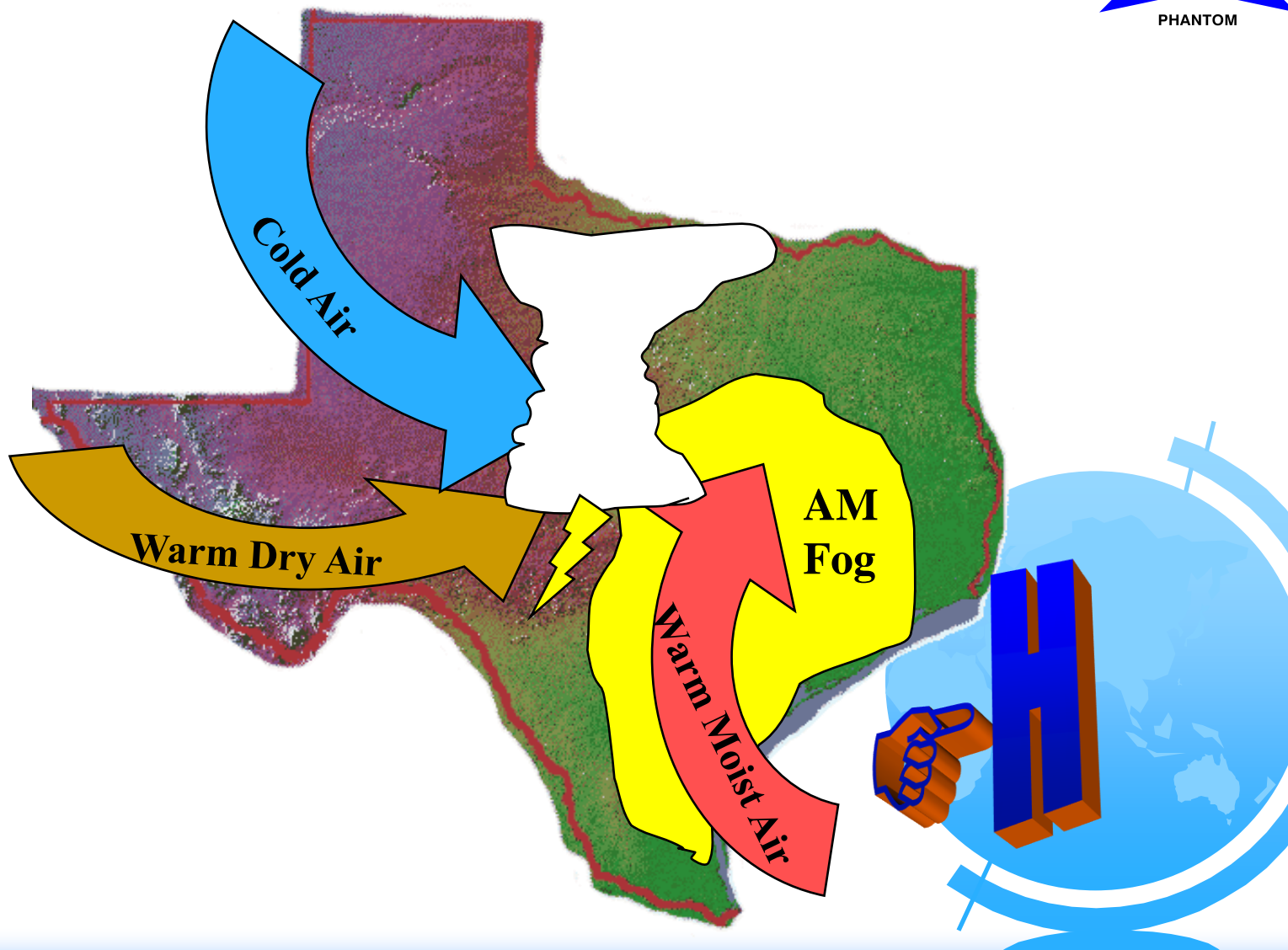




III ARMORED CORPS



Weather Influences





Summer Weather



- ☞ Dominated by high temperatures and isolated afternoon and evening thunderstorms (primarily early summer)
 - Average high temperatures are in the mid 90s and lows in the low 70s
 - Extremes range from 55F to 111F
- ☞ Early Summer is the rainy season
 - Mostly from thunderstorms

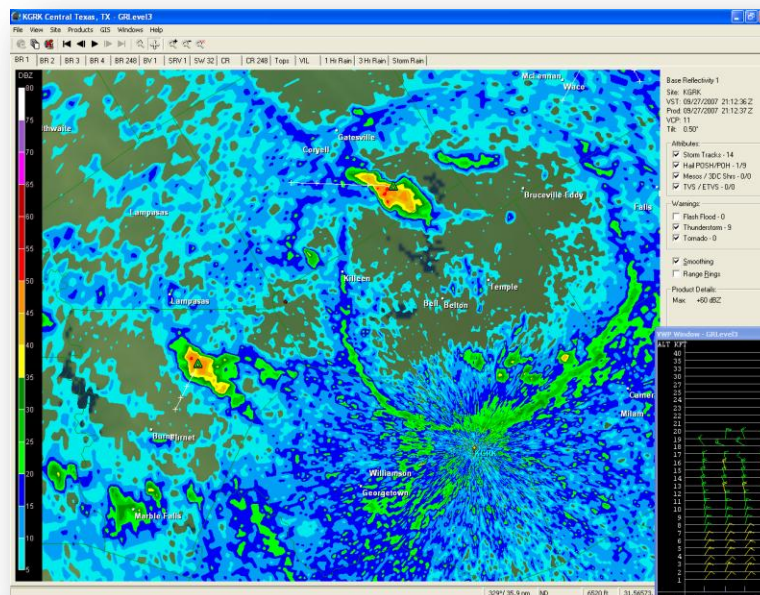




Summer Weather (Cont)



- ☞ Air mass thunderstorms form during the heat of the day and generally move slowly with weak steering flow aloft or can remain stationary late afternoon and early evening





Climatological Data



May Jun Jul Aug Sep

Temperature

Mean Max (F) 86 91 94 96 90

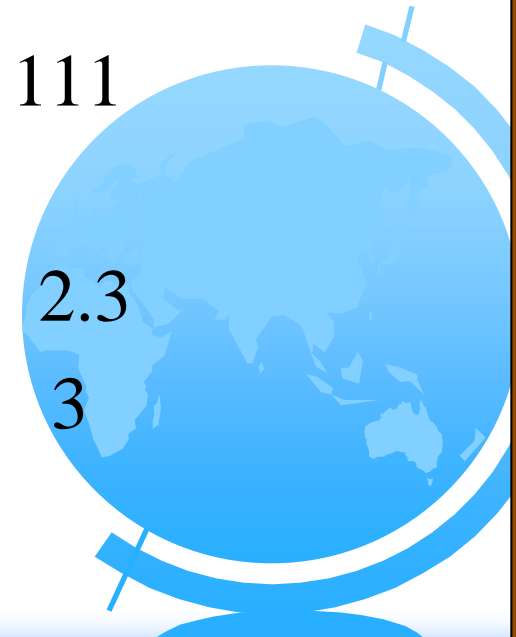
Mean Min (F) 65 71 73 74 68

Extm Max (F) 102 108 109 108 111

Precipitation

Mean Month (inch) 4.4 3.6 1.9 2.6 2.3

Mean # TSTM Days 7 6 6 5 3





CEILING CLIMO

(< 1,000 Ft)



% Ceiling < 1000 ft

Name: ROBERT GRAY AAF, TX United States Block Station: 722576

ICAO: KGRK Lat: 31.067 Lon: -97.833 Time Offset: -6.00

Data Derived from 14WS Surface Observation Database / POR: 1973 - 2005

14WS (AFWA)

151 Patton Ave, Rm 120
Asheville, NC 28801-5002

23Z (17L)	14	12	9	4	2	1	0	1	3	5	10	14
22Z (16L)	15	12	7	5	2	1	0	1	3	5	9	14
21Z (15L)	15	12	8	5	2	1	0	0	3	6	10	14
20Z (14L)	16	13	10	6	1	1	0	1	3	7	10	15
19Z (13L)	19	15	11	7	2	2	0	1	3	8	12	15
18Z (12L)	20	17	13	8	3	1	1	1	5	9	11	17
17Z (11L)	24	20	17	11	5	2	1	2	6	11	14	20
16Z (10L)	25	25	20	14	7	4	1	3	7	14	19	23
15Z (09L)	27	27	22	19	12	5	2	4	11	20	23	25
14Z (08L)	27	27	25	23	16	10	4	6	15	24	26	25
13Z (07L)	27	29	24	25	21	13	7	7	17	25	25	25
12Z (06L)	26	28	25	22	21	12	7	6	16	25	23	23
11Z (05L)	25	24	22	18	20	13	6	5	12	19	21	22
10Z (04L)	27	23	21	16	17	11	5	5	12	18	21	22
09Z (03L)	25	23	20	15	12	7	4	4	10	17	19	21
08Z (02L)	24	20	18	14	10	6	3	3	10	15	17	21
07Z (01L)	22	19	18	11	9	4	2	2	9	12	17	20
06Z (00L)	21	17	17	9	7	3	2	2	6	10	14	19
05Z (23L)	20	16	14	9	5	3	1	2	5	9	14	20
04Z (22L)	18	16	12	8	4	2	1	1	4	8	13	17
03Z (21L)	16	14	11	6	3	2	1	1	4	7	13	16
02Z (20L)	14	16	11	6	3	2	0	1	3	6	12	15
01Z (19L)	14	14	10	5	3	1	0	1	3	5	11	14
00Z (18L)	14	13	10	5	2	1	0	1	3	5	10	13

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec





VISIBILITY CLIMO

(< 3 SM)



% Visibility < 3 SM

Name: ROBERT GRAY AAF, TX United States Block Station: 722576

ICAO: KGRK Lat: 31.067 Lon: -97.833 Time Offset: -6.00

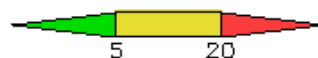
Data Derived from 14WS Surface Observation Database / POR: 1973 - 2005

14WS (AFWA)

151 Patton Ave, Rm 120
Asheville, NC 28801-5002

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22Z (16L)	9	8	4	2	2	1	0	1	2	3	4	8
21Z (15L)	9	7	4	3	2	1	0	1	2	3	5	8
20Z (14L)	10	6	5	3	1	1	0	1	3	2	4	9
19Z (13L)	11	7	5	4	1	1	1	1	2	3	5	9
18Z (12L)	11	7	8	3	2	1	0	1	3	3	5	9
17Z (11L)	15	9	8	5	2	1	1	0	3	4	7	9
16Z (10L)	16	12	9	7	4	1	1	1	3	7	10	13
15Z (09L)	19	16	12	9	5	1	1	1	4	10	14	17
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01Z (19L)	10	8	7	3	2	1	0	0	1	2	5	9
00Z (18L)	10	8	6	3	1	1	0	0	2	3	5	7

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



Summer Hazards





Summer Hazards

☞ Degraded Flying Operations

- Thunderstorms
 - ◆ Downbursts Gusts
 - ◆ Lightning
 - ◆ Hail

☞ High Temperatures

- Coupled with high humidity can cause heat injuries and rapid fatigue
- Ambient temperatures appear to feel warmer than actual temperature (heat index), watch outdoor activity closely





Summer Hazards



- ☞ Thunderstorms
- Strong gusty wind
 - Turbulence
 - Low ceilings
 - Reduced visibilities
 - Hail
 - Severe weather possible

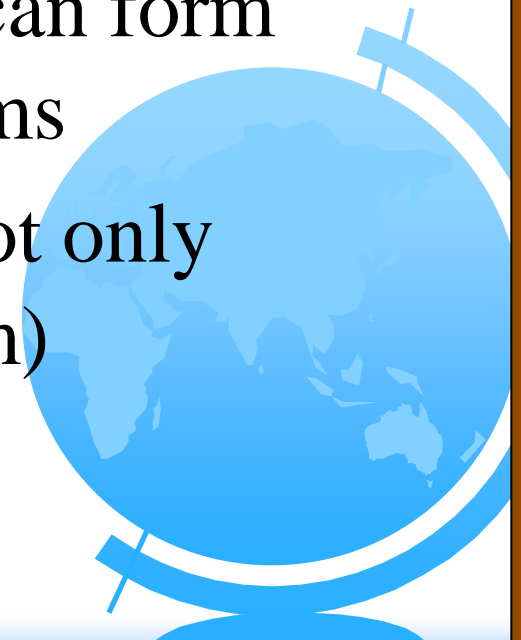




THUNDERSTORMS



- ☞ Expect severe turbulence, icing, and hail
- ☞ Greatest turbulence between updrafts and downdrafts
- ☞ Gust fronts (pseudo cold front) can form ahead of advancing thunderstorms
- ☞ Expect hail beneath the anvil (not only within or under the thunderstorm)





SEVERE WEATHER

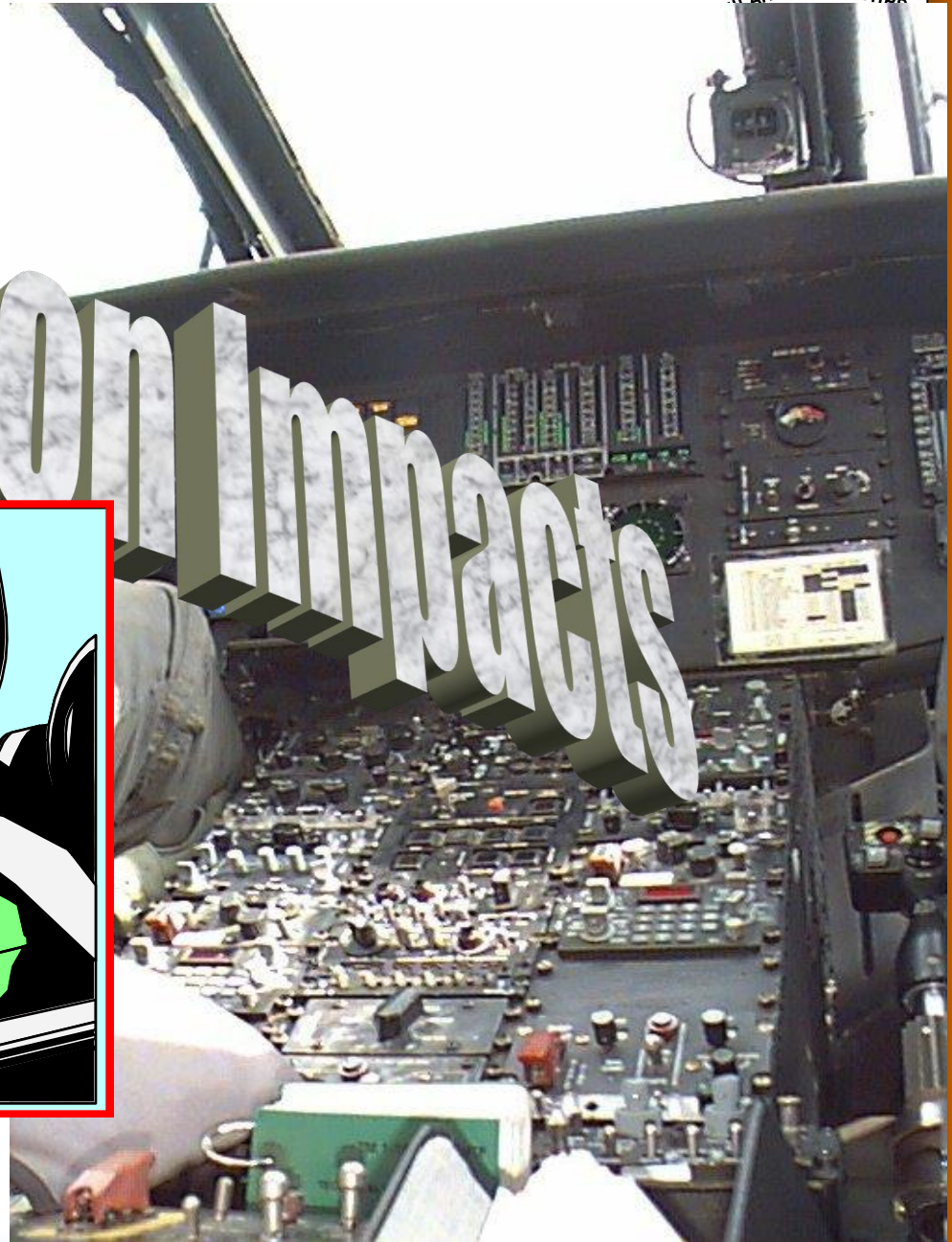


- ☞ Peak season
 - **March through June**
- ☞ Most frequent: afternoon/evening hours
- ☞ Linear formation along or ahead of fronts—dry line thunderstorms
- ☞ **RAPID FORMATION!**
 - **Outflow boundaries enhance further development (usually to the southwest of the line)**





Aviation Impacts



The image features the word "Lightning" in a large, 3D, white font with a slight shadow. The text is positioned diagonally across the center. The background is a dark, stormy sky filled with numerous bright, jagged lightning bolts. One particularly large and bright bolt strikes directly behind the word, creating a strong glow and illuminating the letters. The overall effect is dramatic and high-contrast.

Lightning



LIGHTNING AND ELECTROSTATIC DISCHARGE

- ☞ Leading cause of weather related aircraft accidents
- ☞ Can occur in clear air as well as within and around a thunderstorm



Turbulence





TURBULENCE



- ☞ Turbulence is one of the most unexpected aviation hazards to fly through and one of the most difficult to forecast
- ☞ Caused by *abrupt, small-scale variations in wind speed and direction*
- ☞ **Pilot Reports (PIREPs) are crucial!**
 - May trigger advisories to help warn others
 - Always include location, time, intensity, flight level, and aircraft type

Gray METRO: UHF 306.5





TURBULENCE

(Continued)



☞ May occur any time without warning

- Directly proportional to speed:

Faster aircraft=more turbulence experienced

- Inversely proportional to weight:

Heavier aircraft=less turbulence experienced

- Directly proportional to wing area

Greater distance between leading and trailing edge of wing=more turbulence





TURBULENCE

(Continued)



☞ Intensities based upon Airspeed & Climb Rate

- Light: Slight, erratic changes in altitude and or attitude (pitch, roll, yaw)
- Moderate: Greater intensity than light, but aircraft remains in positive control
- Severe: Large abrupt changes in altitude/attitude, large variations in airspeed; control becomes very difficult
- Extreme: Aircraft violently tossed around with control virtually impossible; may cause structural damage





TURBULENCE

(Continued)



- ☞ Also caused by strong wind over rough terrain (*Fort Hood area not considered rough terrain*)
 - Rougher terrain = More turbulence
 - Higher wind speed = More Turbulence
- ☞ Frontal Transition Zone Turbulence
- ☞ Jet Stream (CAT)





TURBULENCE

(Continued)



- ☞ Wake Turbulence:
Caused by 'Wingtip Vortices'
- ☞ Virtually all aircraft produce wingtip vortices while in flight, even rotary wing aircraft; this is especially apparent with heavier aircraft





LOW-LEVEL WIND SHEAR (LLWS)



- ➡ Rapid change in wind direction or speed below 2,000 feet AGL
- ➡ May occur with or without Turbulence
- ➡ Causes sudden changes in aircraft performance and attitude
- ➡ Common occurrence in Central Texas associated with nocturnal low-level jet
- ➡ Can occur with fronts and thunderstorm gust fronts (microburst)

Gray METRO: UHF 306.5





WEATHER WATCH



- ☞ Special notice for the *potential* of environmental conditions/threats of such intensity as to pose hazard to life or property
- ☞ Issued for *Fort Hood Reservation and the Western Training Area*
- ☞ Command decision on whether or not operations are altered (FHR95-1)
- ☞ Valid times per text and valid for the area described in the text





WEATHER WARNINGS



- ☞ Special notice when an established weather condition/threat of such intensity as to pose a hazard to life or property is **occurring or is expected to occur (*imminent*)**
- ☞ Take actions to protect property and life
- ☞ Valid times per text and valid for the area described in the text





WEATHER ADVISORIES



- ➡ Advisories provide specific notice to an operational agency of weather phenomena *impacting operations*
- ➡ All Fort Hood weather advisories are observed advisories, meaning when the condition is observed by Doppler weather radar, weather sensors, or PIREPs, the advisory will be issued
- ➡ Valid for the area described in the text
- ➡ It will be valid “Until Further Notice” and it will be cancelled when the condition is no longer occurring





Fort Hood Reservation

Watch / Warning / Advisory

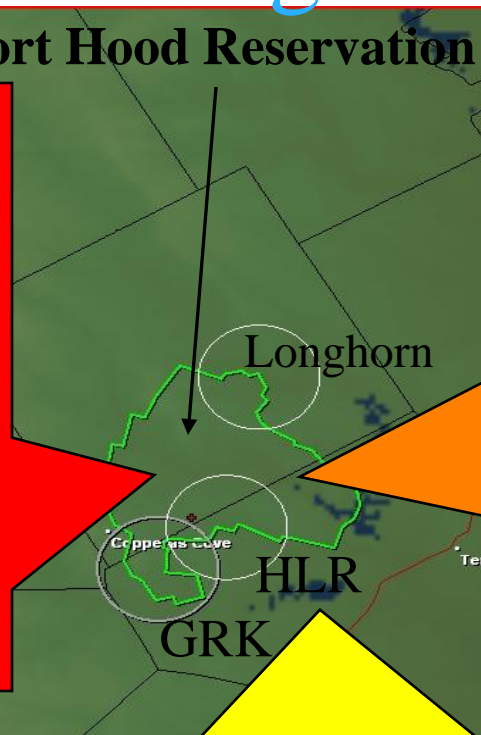


WEATHER WARNINGS:

- Tornado / Funnel Cloud (15 min)
- Severe Thunderstorm (1 hr)
- Damaging Wind ≥ 45 kts (1 hr)
- Moderate Thunderstorm (1 hr)
- Strong Wind 35-44 kts (1 hr)
- Freezing Precipitation (1 hr)
- Heavy Rain 2 in w/i 12 hr (1 hr)
- Heavy Snow 2 in w/i 12 hr (1 hr)
- Lightning (Observed)

*Note: Lightning Warning
will specify if it includes
RGAAF and HAAF or not*

Fort Hood Reservation



WEATHER WATCH

(As potential warrants)

- Tornado / Funnel Cloud
- Severe Thunderstorm
- Damaging Wind ≥ 45 kts
- Freezing Precipitation
- Lightning (30 min)

OBESERVED WEATHER ADVISORIES:

LLWS below 2K ft w/i 50nm Fort Hood

MDT Icing or greater below 10K ft w/i 50nm Fort Hood

MDT Turb or greater below 10K ft w/i 50 nm Fort Hood

Surface Wind 25 knots or greater Fort Hood Reservation



Fort Hood Reservation



☞ Severe Thunderstorm

- Damaging wind ≥ 45 knots and/or
- Damaging hail $\geq \frac{1}{2}$ inch in diameter

☞ Moderate Thunderstorm

- High wind ≥ 35 knots to < 45 knots and/or
- Large hail $\geq \frac{1}{4}$ inch to $< \frac{1}{2}$ inch

☞ **IMPORTANT: Refer to FH Reg 95-1 for specific severe weather plans/actions**





WESTERN TRAINING AREA

Watch / Warning

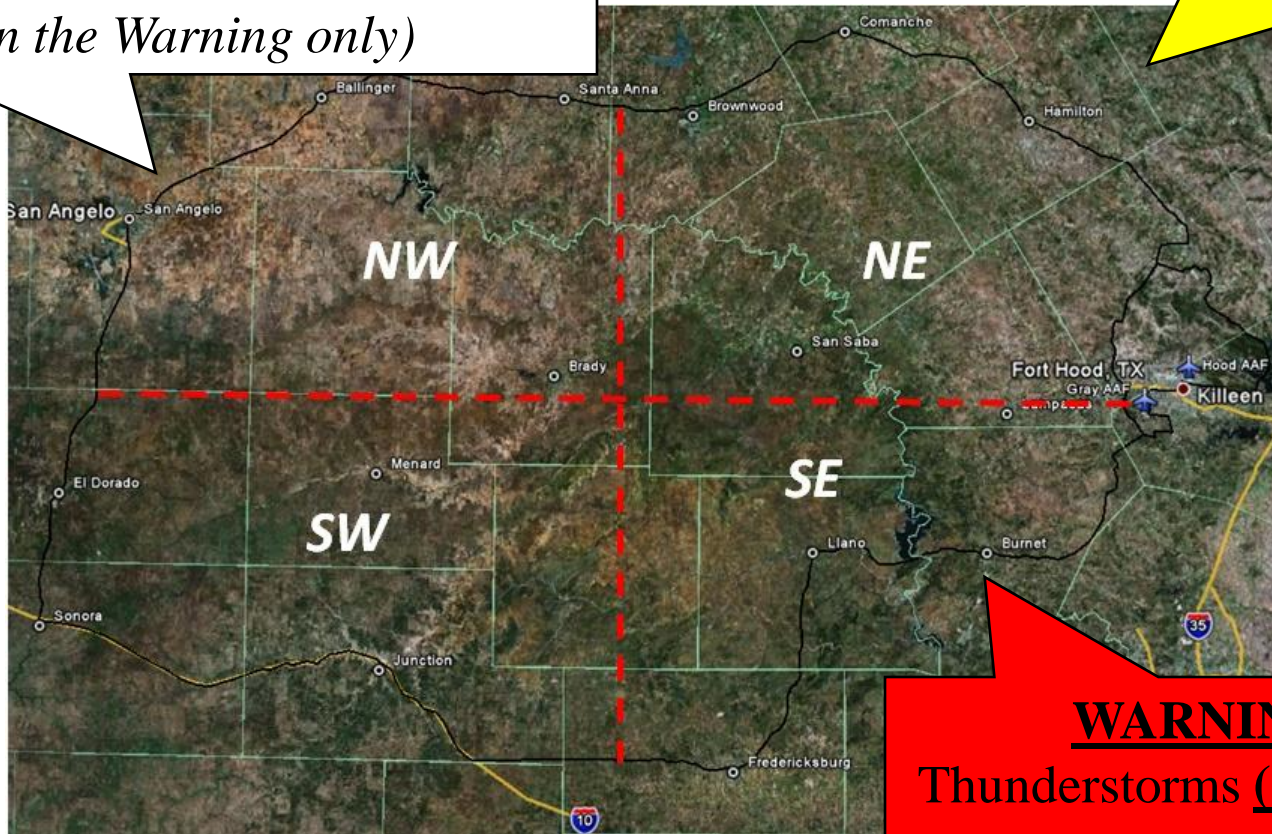


WTA

Divided into 4 sectors
(Text will specify area(s) impacted
in the Warning only)

WEATHER WATCH

Thunderstorms (2 hr advance notice)



WARNING:

Thunderstorms (Observed)



PILOT REPORTS (PIREPs)

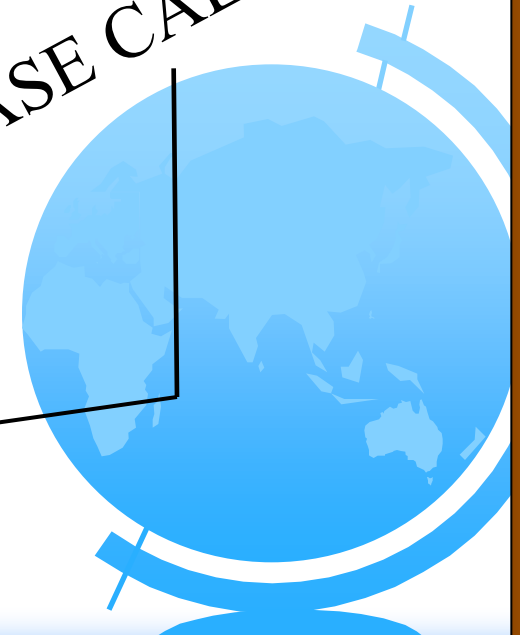


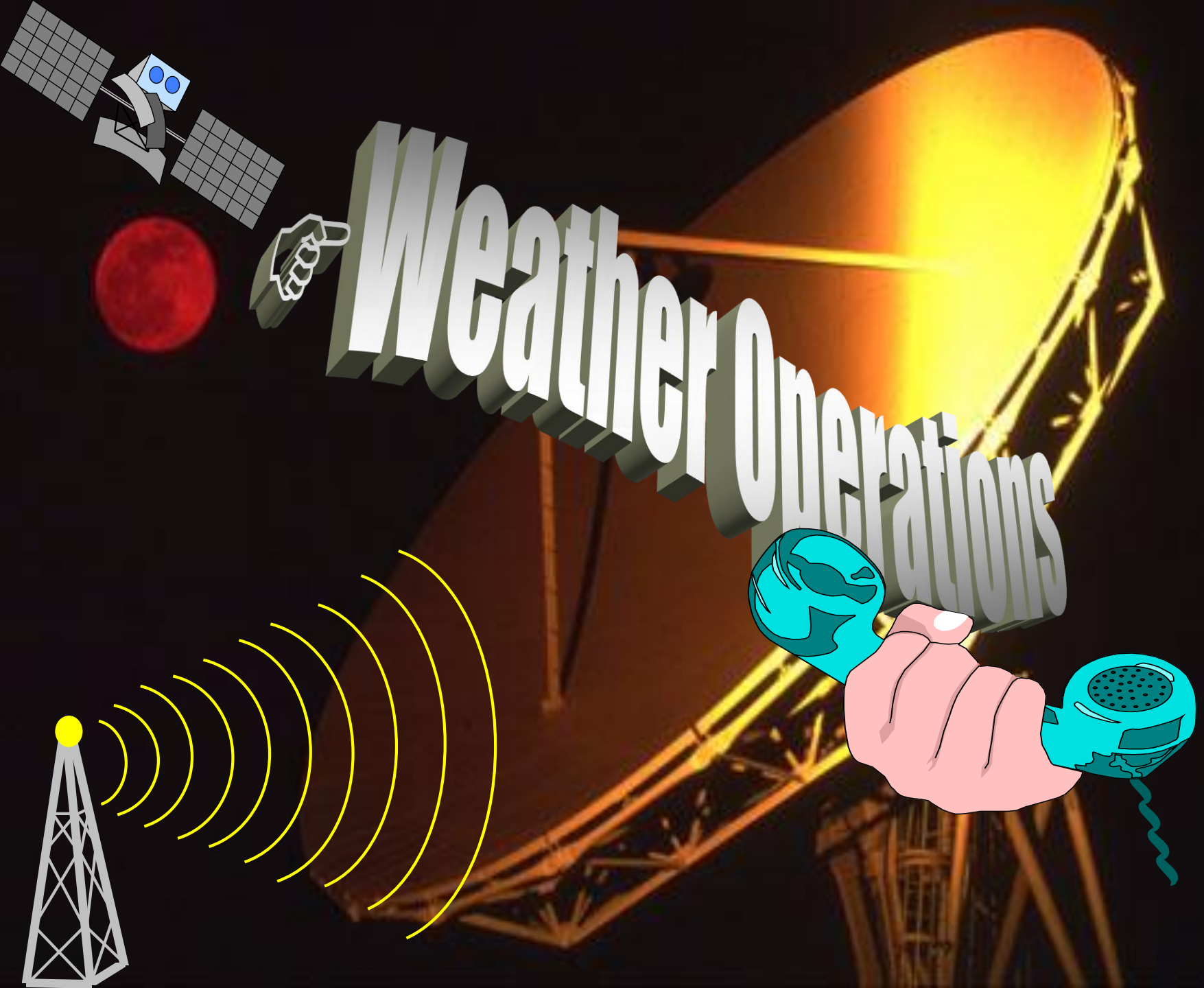
☞ Provide forecasters additional observations around the reservation and Western Training Area

- Thunderstorms
- Turbulence
- Icing
- Low-Level Wind Shear (LLWS)
- Cloud conditions
- Wind, temperature, etc..
- Visibility, weather (i.e., fog, rain, etc.)

☞ PMSV frequencies: **UHF 306.5**

PLEASE CALL US!!!







RGAAF Weather Station Operations



- ☞ RGAAF Weather Station located on West Fort Hood, Airfield Ops Bldg 90029:
 - 24/7 Operations
 - 2 Forecasters Mon-Fri 0600-1400L
 - 1 Forecaster Nights, Weekends, & Holidays
 - Manual Weather Observations for GRK
 - Flight Weather Briefings
- ☞ HAAF: Automated Weather Observations Only

Gray METRO: UHF 306.5





FLIGHT WEATHER BRIEFINGS



- ☞ Call 288-9620 or 288-9400
- ☞ E-mail: usarmy.hood.3-asog.mbx.3ws-woc@mail.mil
- ☞ Please follow up flight weather briefing requests sent via E-mail with a phone call
- ☞ Please arrange DD175-1 weather briefings as far in advance as possible
- ☞ **IAW AR 95-1, ONLY PILOTS CAN RECEIVE FLIGHT WEATHER BRIEFINGS**





FLIGHT WEATHER BRIEFINGS (Continued)



- ➡ DD175-1 Weather Briefs can be faxed or E-mailed
- ➡ **IMPORTANT:** Aircrews must call 288-9620/9400 after receiving the brief for briefer's initials, brief & void times--otherwise briefing is not official!





3D Weather Squadron Homepage

www.hood.army.mil/3ws





Fort Hood Home Page



INSTALLATION STATUS: Welcome to Fort Hood's updated web presence - designed to enhance

HOOD A-Z HOOD FMWR IMCOM FORSCOM CENTCOM ARMY HOME DEFENSE LINK WEATHER FA ARMY A-Z AKO

HOOD.ARMY.MIL
WELCOME TO FORT HOOD, TEXAS

...The Great Place

Tuesday, September 23, 2008 2:31:04 PM

search hood.army.mil Search FORT H

INSTITUTION HOME

FORT HOOD

NEWS CENTER

PHANTOM DISTRO

NEWCOMERS

UNITS ON POST

SOLDIER RESOURCES

EDUCATION & TRAINING

FAMILY FOCUS

CIVILIANS & CONTRACTORS

FRIENDS & PARTNERS

MEDICAL

RETIREES & VETS

LINKS

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ARMY RETENTION The next step in your Army Career

Civilian Spotlight
Former Dallas Cowboys linebacker Eugene "The Hitting Machine" Lockhart visited wounded warriors

Soldier dead
By Heather Graham, Ser
Specialist Aaron Mulberry, Ind., a found dead fol Thursday by Fort his Pershing Park
Allmandinger's not home when t

CAMP TAJIL, Iraq area defense set CAB, 4th Inf. Di perimeter security guard tower on C sergeant of the responsible for CAB's assigned necessary equip duties necessary brigade's Soldiers from enemy attac

< Previous

and climate forecasts and warnings for the United States, its territories, adjacent waters and ocean areas, for the protection of life and property and the enhancement of the national economy. NWS data and products form a national information database and infrastructure which can be used by other governmental agencies, the private sector, the public, and the global community. Get the latest Fort Hood weather from any Internet portal by clicking on:

Further, complaints must be promptly filed within IG, command, or other grievance channels. IG's may dismiss a complaint if there is no FWA, recognizable wrong or violation of law, regulation, or policy. Also, complaints should be received in a timely manner.

<http://www.srh.noaa.gov/forecast/MapClick.php?CityName=Killeen&state=TX&site=FWD>

3d Weather Squadron

The squadron is the largest base- or post-level weather unit in the Air Force. The support provided by the squadron is as diverse as its history and that of the Army customers it supports. For example, the squadron maintains a 24-hour observing and forecasting section at Robert Gray Army Airfield with automated observing at Hood Army Airfield.

The latest weather information for professional aviators - or anyone with AKO access - is online at: <http://www.hood.army.mil/3ws>.

NOAA Storm Watch

You'll find links to the latest weather forecasts around the USA. Track storms through NOAA weather satellites, get the latest weather maps and learn how to protect yourself and your community from severe weather. Hurricane, drought and tornado information can be found at the listed NOAA Web sites. Check it out online at: <http://www.noaa.gov/stormwatch/>.

National Hurricane Center

Click here,
then here



3D Weather Squadron Homepage



Current MWP (Flimsy)

Misc Briefings

Current WWAs

3d Weather Squadron
Fort Hood, Texas

"2011 ACC OUTSTANDING BATTLEFIELD WEATHER SQUADRON"

PLEASE PROVIDE US FEEDBACK ON OUR MISSION WEATHER PRODUCTS!

[NEW 3 WS MISSION PLANNING/EXECUTION FORECAST FLIMSY](#)

To contact us... [3 WS DIRECTORY](#)

WEDNESDAY, JANUARY 30

[WEATHER STATION E-MAIL](#)

FORT HOOD WEATHER *FORT HOOD WEATHER WATCHES, WARNINGS, AND ADVISORIES (WWA) <i>Click above for active Weather Watches, Warnings, and Advisories for Fort Hood</i> *KGRK OBSERVATION & TAF *KHLR OBSERVATION <i>* Denotes .mil access required</i>	MISSION WEATHER PRODUCTS (MWP) FORT HOOD FORECAST FLIMSY  FORT HOOD 5-DAY FORECAST  Breakdown of Weather Impacts		BRIEFINGS SEMI-ANNUAL AVIATION WEATHER BRIEF (SUMMER) SEMI-ANNUAL AVIATION WEATHER BRIEF (WINTER) AIR TRAFFIC CONTROL WEATHER TRAINING DAILY METCON QUESTION PERFORMANCE METRICS: HOW WELL ARE WE FORECASTING?
AVIATION WEATHER PILOT REPORTS (PIREPS) AIRMETS/SIGMETS SPACE WEATHER IMPACTS <i>CLICK BELOW FOR FLIGHT WEATHER BRIEFINGS OR OTHER REQUESTS FOR WEATHER SUPPORT:</i> WEATHER STATION E-MAIL RGAAF PMSV (Gray Metro): WME 266 F	SATELLITE/RADAR/LIGHTNING/HAZARDS SATELLITE  CENTRAL TEXAS (FORT HOOD) RADAR 		DoD WEATHER *AIR FORCE WEATHER WEB SERVICES (AFW-WEBS) *26th OPERATIONAL WEATHER SQUADRON (OWS) *15th OPERATIONAL WEATHER SQUADRON (OWS)

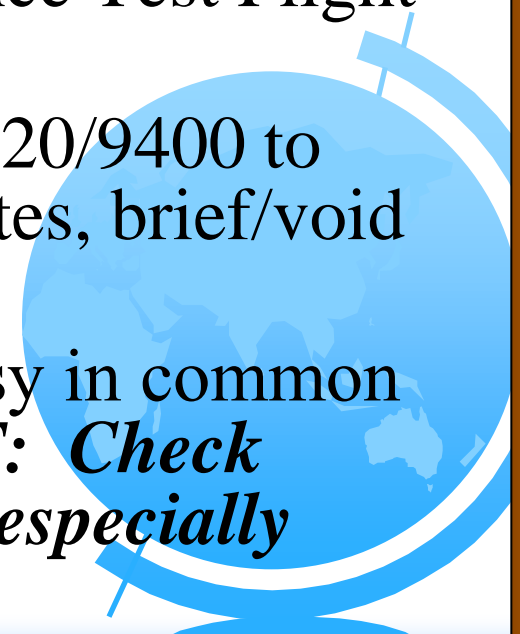
Current Obs



3 WS Mission Weather Product (MWP) - Flimsy



- ➡ Located on our web page:
www.hood.army.mil/3ws
- ➡ Updated 3 times daily (0000Z, 0800Z, 1600Z)
- ➡ Can be used by aircrews flying VFR within the Fort Hood Reservation & Maintenance Test Flight Areas--must call for official brief
 - Call the weather station at 288-9620/9400 to verify current Flimsy #, any updates, brief/void time and forecaster's initials
 - Units' ops may post copy of flimsy in common areas for aircrews (**IMPORTANT: Check website periodically for changes especially during inclement weather**)






MWP (3 WS Flimsy)



3d Weather Squadron - Windows Internet Explorer
http://www.hood.army.mil/3ws/

3d WEATHER SQUADRON - FORT HOOD MISSION PLANNING / EXECUTION FORECAST													
DATE:	30-Jan-13	VALID TIME:	30/1600Z - 31/0400Z	MEF #	30	C	REV #		TIME:	306.5 UHF			
FORECASTER:	Sra Craig	3d WS Homepage:	www.hood.army.mil/3ws			RGAAF METRO:	306.5 UHF						
SOLAR / LUNAR DATA										SPACE WEATHER IMPACTS			
DATE	BMNT	SR	SS	EENT	MR	MS	ILLUM	MOON ANGLE ≥30°	GPS	G	Unlikely Degradation		
30-Jan-13	0630L	0725L	1805L	1900L	2145L	0911L	83%	29/238-0641	UHF	G	Unlikely Degradation		
31-Jan-13	0629L	0724L	1806L	1901L	2245L	0946L	75%	0030-0712	HF	G	Unlikely Degradation		
FLIGHT LEVEL WINDS (KNOTS) AND TEMPERATURES (°C) - FORT HOOD RESERVATION													
500' AGL	1,000' AGL	3,000' AGL	3,000' AGL	5,000' MSL	6,000' MSL	8,000' MSL	10,000' MSL						
33020	07°C	33025	06°C	34035	02°C	34040	-01°C	34045	-02°C	34050	-04°C	33040	-06°C
33055												33055	-10°C
FLIGHT HAZARDS FOR LOCAL FLYING AREA (LAW FHR 95-1)													
HAIL, SEVERE TURB/ICING, HEAVY PRECIP, LIGHTNING & WIND SHEAR EXPECTED IN & NEAR T-STORMS													
CAT II ACFT: UH-60, AH-64, CH-47, UH-72, BE-20, UC-35, C-205, GRAY EAGLE UAS // CAT I ACFT: HUNTER, SHADOW UAS													
										PLEASE PROVIDE FEEDBACK			
													
HAZARDS	INTENSITY/COVERAGE			LEVELS (MSL)		LOCATION							
THUNDERSTORMS	NONE			MAX TOPS									
ICING	NONE												
TURB CAT II	MDT // LGT OCNL MDT			SFC - 040 // 040 - 420		ENTIRE LFA						MIN FREEZING LEVEL	
TURB CAT I (FHR ONLY)	MDT -SVR // MDT			SFC -040 // 040 -180		FT HOOD RESERVATION						030	MSL
FORT HOOD RESERVATION AREA FORECAST (INCLUDES RGAAF, HAAF, LONGHORN AND SHORTHORN AUXILIARY AIRFIELDS)													
VALID TIME	MIN CIG (AGL)	MIN VIS (SM)	SIG WX	SURFACE WIND		MAX TEMP		MAX DPT	RH %	MIN ALSTG	RGAAF	HAAF	
						°C	°F	°C			MAX PA	MAX PA	MAX DA
1600Z - 1800Z	NONE	7		27020	G35	10	50	-04	37%	30.06	887 ft	796 ft	562 ft
1800Z - 2000Z	NONE	7		29020	G35	12	54	-04	32%	30.12	831 ft	867 ft	740 ft
2000Z - 2200Z	NONE	7		30015	G25	13	55	-05	28%	30.12	831 ft	997 ft	740 ft
2200Z - 2400Z	NONE	7		31012	G18	10	50	-05	34%	30.13	822 ft	595 ft	731 ft
0000Z - 0200Z	NONE	7		Vrbo6		06	43	-06	42%	30.15	804 ft	52 ft	713 ft
0200Z - 0400Z	NONE	7		Vrbo6		03	37	-06	52%	30.18	776 ft	-374 ft	685 ft
FORT HOOD PLAIN LANGUAGE FORECAST / OUTLOOK FOR THE NEXT 24-HOURS													
MOSTLY CLEAR SKIES WITH GUSTY WINDS IN THE MORNING REACHING A MAX OF 40 MPH AND DYING DOWN IN THE LATE AFTERNOON TO 28MPH GOING VARIABLE IN THE NIGHT TIME HOURS. HIGHS IN THE MID 50s LOWS IN THE MID 30s.													
TEST FLIGHT AREA (TFA) // (LAW FHR 95-1)							WESTERN TRAINING AREA (TFA) // (LAW FHR 95-1)						
VALID TIME	LOCATION	TFA III	TFA IV	TFA V	TFA VI		VALID TIME	LOCATION	NE	SE	SW	NW	
1600 - 2000Z	MIN CIG (AGL)	NONE	NONE	NONE	NONE		1600 - 2000Z	MIN CIG (AGL)	NONE	NONE	NONE	NONE	
	MIN VIS (SM)	7	7	7	7			MIN VIS (SM)	7	7	7	7	
	SIG WX							SIG WX					
	SFC WND	28020	G35	28020	G35	28020	G35	SFC WND	28020	G35	28020	G35	28020
VALID TIME	LOCATION	TFA III	TFA IV	TFA V	TFA VI		VALID TIME	LOCATION	NE	SE	SW	NW	
2000 - 0000Z	MIN CIG (AGL)	NONE	NONE	NONE	NONE		2000 - 0000Z	MIN CIG (AGL)	NONE	NONE	NONE	NONE	
	MIN VIS (SM)	7	7	7	7			MIN VIS (SM)	7	7	7	7	
	SIG WX							SIG WX					
	SFC WIND	31020	G30	31020	G30	31020	G30	SFC WIND	31020	G30	31020	G30	31020
VALID TIME	LOCATION	TFA III	TFA IV	TFA V	TFA VI		VALID TIME	LOCATION	NE	SE	SW	NW	
0000 - 0400Z	MIN CIG (AGL)	NONE	NONE	NONE	NONE		0000 - 0400Z	MIN CIG (AGL)	NONE	NONE	NONE	NONE	
	MIN VIS (SM)	7	7	7	7			MIN VIS (SM)	7	7	7	7	
	SIG WX							SIG WX					
	SFC WIND	Vrbo6	Vrbo6	Vrbo6	Vrbo6			SFC WIND	Vrbo6	Vrbo6	Vrbo6	Vrbo6	

3d Weather Squadron

Fort Hood, Texas

"2011 ACC OUTSTANDING BATTLEFIELD WEATHER SQUADRON"

PLEASE PROVIDE US FEEDBACK ON OUR MISSION WEATHER PRODUCTS!

NEW 3 WS MISSION PLANNING/EXECUTION FORECAST FLIMSY

To contact us... **3 WS DIRECTORY**

WEDNESDAY, JANUARY 30

WEATHER STATION E-MAIL

IMAGES BELOW DO NOT DEPICT ACTUAL CONDITIONS
CLICK ON THUMBNAILS FOR CURRENT INFORMATION

MISSION WEATHER PRODUCTS (MWP)

FORT HOOD FORECAST FLIMSY

FORT HOOD 5-DAY FORECAST

FOR ACTIVE WEATHER WATCHES AND ADVISORIES FOR FORT HOOD

OBSERVATION & TAF

IR OBSERVATION

ATION WEATHER

S (PIREES)

ETS

OW FOR FLIGHT WEATHER OR OTHER REQUESTS FOR WEATHER SUPPORT:

ER STATION E-MAIL

PMSV (Gray Metro):

WE 306.5

BRIEFINGS

SEMI-ANNUAL AVIATION WEATHER BRIEF (SUMMER)

SEMI-ANNUAL AVIATION WEATHER BRIEF (WINTER)

AIR TRAFFIC CONTROL WEATHER TRAINING

DAILY METCON QUESTION

PERFORMANCE METRICS: HOW WELL ARE WE FORECASTING?

DoD WEATHER

AIR FORCE WEATHER WEB SERVICES (AFW-WEBS)

26th OPERATIONAL WEATHER SQUADRON (OWS)

13th OPERATIONAL WEATHER SQUADRON (OWS)


Click here

www.hood.army.mil/3ws/Flimsy/MEF.pdf



MWP – Flight Hazards



FLIGHT HAZARDS FOR LOCAL FLYING AREA (IAW FHR 95-1)					
HAIL, SEVERE TURB/ICING, HEAVY PRECIP, LIGHTNING & WIND SHEAR EXPECTED IN & NEAR T-STORMS					PLEASE PROVIDE FEEDBACK
CAT II ACFT: UH-60, AH-64, CH-47, UH-72, BE-20, UC-35, C-208, GRAY EAGLE UAS // CAT I ACFT: HUNTER, SHADOW UAS					
HAZARDS	INTENSITY/COVERAGE	LEVELS (MSL)		LOCATION	
THUNDERSTORMS	NONE	MAX TOPS			
ICING	NONE				
TURB CAT II	MDT // LGT OCNL MDT	SFC - 040 // 040 - 420		ENTIRE LFA	MIN FREEZING LEVEL
TURB CAT I (FHR ONLY)	MDT-SVR // MDT	SFC-040 // 040 - 180		FT HOOD RESERVATION	030 MSL


- Flight hazards are for the Local Flying Area as defined in FHR95-1 and are color coded for the threat based on table below

Criteria	Green	Amber	Red
Thunderstorms	None		Any
Icing	None	Light	≥ Moderate
Turbulence (CAT II)	None - Light	Moderate	≥ Severe
Turbulence (CAT I)	None - Light	Moderate	≥ Severe



MWP – Turbulence



FLIGHT HAZARDS FOR LOCAL FLYING AREA (IAW FHR 95-1)					
HAIL, SEVERE TURB/ICING, HEAVY PRECIP, LIGHTNING & WIND SHEAR EXPECTED IN & NEAR T-STORMS					PLEASE PROVIDE FEEDBACK
CAT II ACFT: UH-60, AH-64, CH-47, UH-72, BE-20, UC-35, C-208, GRAY EAGLE UAS // CAT I ACFT: HUNTER, SHADOW UAS					
HAZARDS	INTENSITY/COVERAGE	LEVELS (MSL)		LOCATION	
THUNDERSTORMS	NONE	MAX TOPS			
ICING	NONE				
TURB CAT II	MDT // LGT OCNL MDT	SFC - 040 // 040 - 420		ENTIRE LFA	MIN FREEZING LEVEL
TURB CAT I (FHR ONLY)	MDT-SVR // MDT	SFC -040 // 040 - 180		FT HOOD RESERVATION	030 MSL

- An aircraft's sensitivity varies considerably with its weight (amount of fuel, cargo, munitions, etc.), air density, wing surface area, wing sweep angle, airspeed, and aircraft flight "attitude"
- All manned aircraft on Fort Hood are considered CAT II while all UAS (Shadow, Hunter, & Gray Eagle) are considered CAT I for turbulence forecasts
- CAT I turbulence forecasts are for the Ft Hood Reservation only and Surface to 18,000 feet



MWP – Fort Hood Reservation Forecast



FORT HOOD RESERVATION AREA FORECAST (INCLUDES RGAAF, HAAF, LONGHORN AND SHORTHORN AUXILIARY AIRFIELDS)														
VALID TIME	MIN CIG (AGL)	MIN VIS (sm)	SIG WX	SURFACE WIND		MAX TEMP		MAX DPT	RH %	MIN ALSTG	RGAAF		HAAF	
						°C	°F	°C			MAX PA	MAX DA	MAX PA	MAX DA
1600Z - 1800Z	NONE	7		04012	G35	29	84	15	43%	29.92	1016 ft	3343 ft	925 ft	3231ft
1800Z - 2000Z	030	3	BR	16027	G22	29	84	16	45%	29.90	1034 ft	3365 ft	943 ft	3253 ft
2000Z - 2200Z	020	2	BR	16027	G25	31	88	14	36%	29.88	1053 ft	3663 ft	962 ft	3550 ft
2200Z - 2400Z	015	2	BR	16027	G30	29	84	15	43%	29.50	1407 ft	3821ft	1316 ft	3709 ft
0000Z - 0200Z	010	1 1/2	BR	16027	G38	25	77	16	57%	29.60	1313 ft	3166 ft	1222 ft	3054ft
0200Z - 0400Z	004	1/4	FG	16010		21	70	16	73%	30.30	666 ft	1842 ft	575 ft	1729 ft

- Color coded based on forecast conditions/threat (2-hour blocks)
- Forecast is for worse case conditions for the time period
- PA and DA specifically for RGAAF and HAAF

Criteria	Green	Amber	Red
Minimum Ceiling	≥ 3,000	< 3,000	< 500
Minimum Visibility	≥ 3sm	< 3sm	< 1/2sm
Significant Wx	None	SHRA, DZ, RA	TS and/or FZ
Winds	< 25 kts	≥ 25 kts	≥ 45 kts



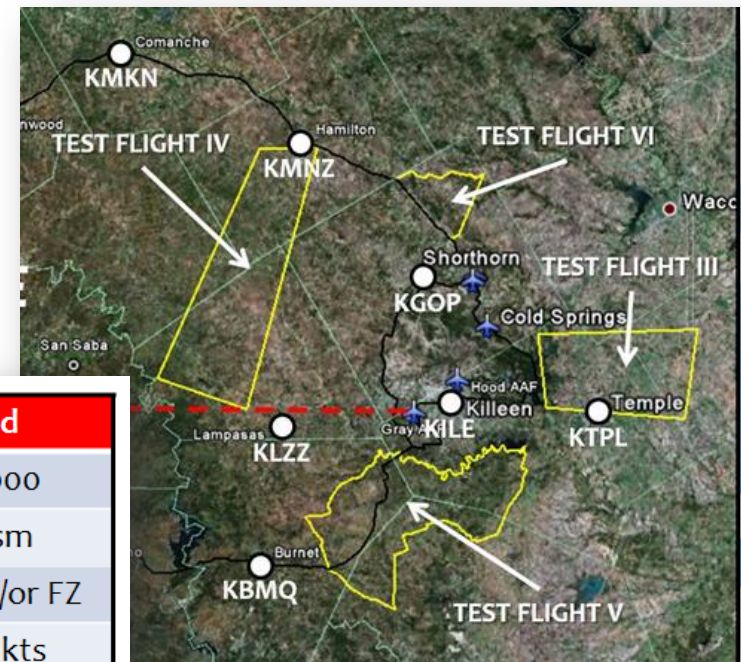
MWP – Maintenance Test Flight Areas



TEST FLIGHT AREA (TFA) // (IAW FHR 95-1)									
VALID TIME	1600 - 2000Z								
LOCATION	TFA III		TFA IV		TFA V		TFA VI		
MIN CIG (AGL)	060		005		060		060		
MIN VIS (SM)	5		1/4		1/4		5		
SIG WX	BR		TSRA		BR		BR		
SFC WND	14015	G27	14015	G50	14015		14015	G27	
VALID TIME	2000 - 0000Z								
LOCATION	TFA III		TFA IV		TFA V		TFA VI		
MIN CIG (AGL)	060		060		060		060		
MIN VIS (SM)	5		5		5		5		
SIG WX	BR		BR		BR		BR		
SFC WIND	14015	G27	14015	G27	14015	G27	14015		
VALID TIME	0000 - 0400Z								
LOCATION	TFA III		TFA IV		TFA V		TFA VI		
MIN CIG (AGL)	060		060		060		060		
MIN VIS (SM)	5		5		5		5		
SIG WX	BR		BR		BR		BR		
SFC WIND	14015	G27	14015	G27	14015	G27	14015	G27	

- Primary Test Flight Areas as defined in FHR95-1
- 4-hour forecasts color-coded based on the table below

Criteria	Green	Amber	Red
Minimum Ceiling	≥ 3,000	< 3,000	< 1,000
Minimum Visibility	≥ 3sm		< 3sm
Significant Wx	None	SHRA, DZ, RA	TS and/or FZ
Winds	< 35 kts	≥ 35 kts	≥ 45 kts





MWP – Western Training Area (WTA)



WESTERN TRAINING AREA // (IAW FHR 95-1)									
VALID TIME	1600 - 2000Z								
LOCATION	NE		SE		SW		NW		
MIN CIG (AGL)	060		060		060		060		
MIN VIS (SM)	5		5		5		5		
SIG WX	BR		BR		BR		BR		
SFC WND	14015	G27	14015	G27	14015	G27	14015		
VALID TIME	2000 - 0000Z								
LOCATION	NE		SE		SW		NW		
MIN CIG (AGL)	060		060		060		060		
MIN VIS (SM)	5		5		5		5		
SIG WX	BR		BR		BR		BR		
SFC WIND	14015	G27	14015	G27	14015	G27	14015	G27	
VALID TIME	0000 - 0400Z								
LOCATION	NE		SE		SW		NW		
MIN CIG (AGL)	060		060		060		060		
MIN VIS (SM)	5		5		5		5		
SIG WX	BR		BR		BR		BR		
SFC WIND	14015	G27	14015	G27	14015	G27	14015	G27	

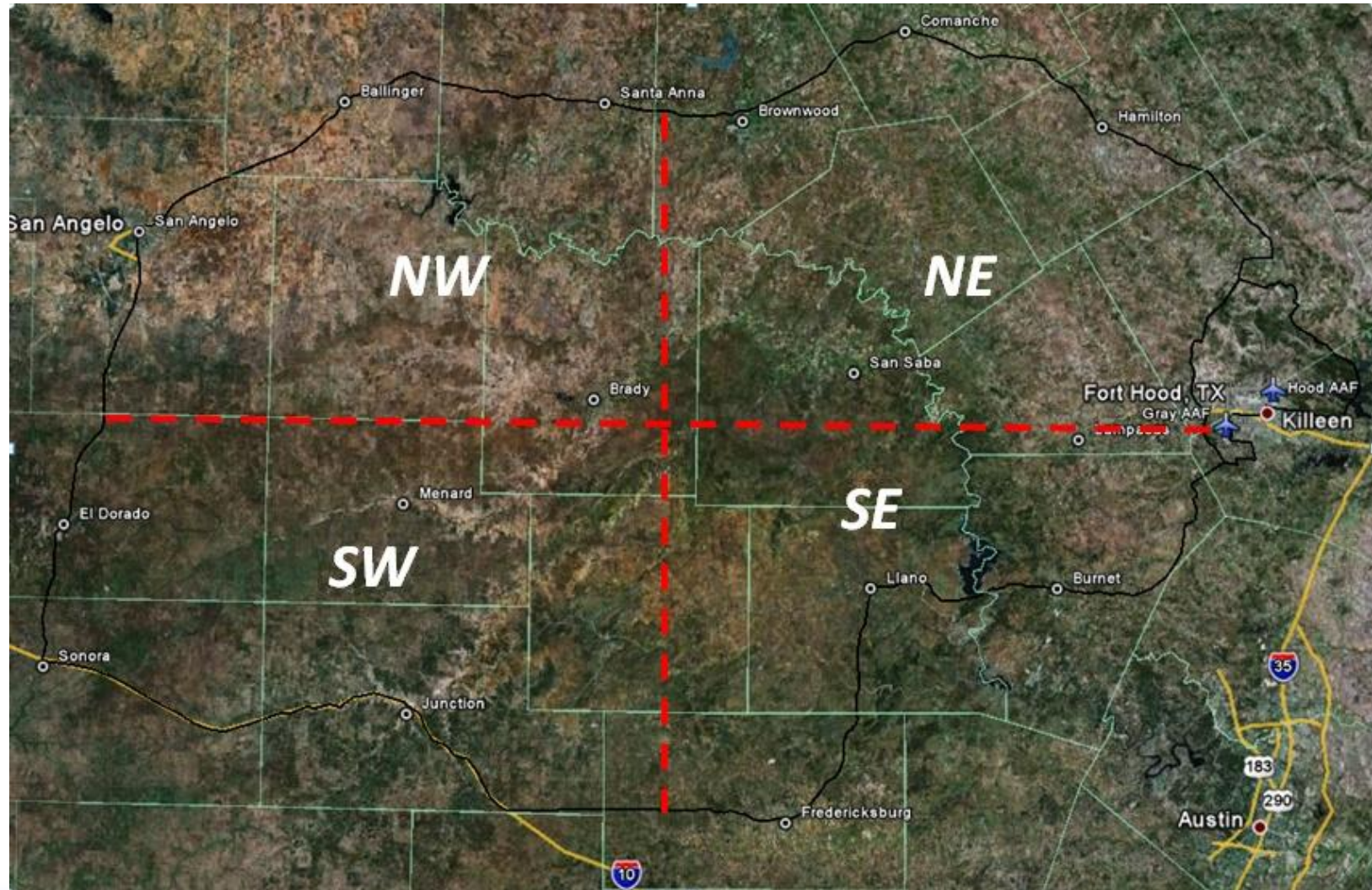
- WTA as defined by FHR95-1 (separated into 4-sections)
- 4-hour forecasts color-coded based on the table below

Criteria	Green	Amber	Red
Minimum Ceiling	$\geq 3,000$	$< 3,000$	$< 1,000$
Minimum Visibility	$\geq 3\text{sm}$		$< 3\text{sm}$
Significant Wx	None	SHRA, DZ, RA	TS and/or FZ
Winds	$< 35\text{ kts}$	$\geq 35\text{ kts}$	$\geq 45\text{ kts}$



Western Training Area

III ARMORED CORPS





Shadow UAS MWP

- ➡ Only used by Shadow UAS units
- ➡ Use 3 WS MWP (Flimsy) for mission planning
- ➡ Contact RGAAF weather station for actual flight weather briefs
 - ➡ Provide Unit, Phone #, Location (i.e., LSCS), Aircraft Tail#, Launch/Landing Time, Flight Level, and Operator Name

SHADOW UAS MISSION WEATHER PRODUCT (MWP)				
Unit / Phone #			Location	
Aircraft Tail #	Launch DTG	Recovery DTG		
FLIGHT LEVEL	WWA(s)		NONE	
Temp (C)	Freezing Level	Brief Time		
Dew Point (C)	Wind/Temp Aloft (C)		Void time	
RH (%)	2K MSL	Extended Time		
ALSTG	4K MSL	Initials Briefer		
PA	6K MSL	Name Operator		
DA	8K MSL	Remarks		
SFC Wind--Launch	10K MSL			
SFC Wind--Recovery	Thunderstorms			
Minimum Visibility/WX	Turbulence (CAT I)			
Minimum Ceiling	Icing			

CAT I Turbulence

Minimum/worst conditions expected for the mission duration



5-Day Forecast



Fort Hood 5-Day Weather Outlook & Effects

March Climatology

Avg Hi: 72F Avg Low: 51F

Avg Precip: 2.5 Inches

FORT HOOD 5-DAY FORECAST

AS OF 0300 HRS LOCAL 18 MAR 13

FORECAST	Mon 18 Mar 13		Tue 19 Mar 13		Wed 20 Mar 13		Thu 21 Mar 13		Fri 22 Mar 13	
	LO: 61F/16C	HI: 81F/27C	LO: 61F/16C	HI: 79F/26C	LO: 57F/14C	HI: 70F/21C	LO: 59F/15C	HI: 79F/26C	LO: 37F/3C	HI: 73F/23C
	WIND CHILL	N/A	WIND CHILL	N/A	WIND CHILL	N/A	WIND CHILL	N/A	WIND CHILL	N/A
	HEAT INDEX	N/A	HEAT INDEX	N/A	HEAT INDEX	N/A	HEAT INDEX	N/A	HEAT INDEX	92F/33C
	WINDS	12 KTS	12G25 KTS	9 KTS	10 KTS	10 KTS	10 KTS	13 KTS	16 KTS	12G18 KTS
	SKY/VIS/WX CONDITIONS	5 MI / 1000FT	7 MI / NO CIG	7 MI / NO CIG	7 MI / 3000FT	5 MI / 3000FT	5 MI / NO CIG	5 MI / NO CIG	2 MI / 2200FT	<1 MI / 300FT
	DA / PA	MAX DA: +2858FT	MAX PA: +1212FT	MAX DA: +2561FT	MAX PA: +1110FT	MAX DA: +2346FT	MAX PA: +916FT	MAX DA: +2773FT	MAX PA: +1212FT	MAX DA: +3947FT
	SOLAR / LUNAR DATA	BMNT: 0645 SR: 0737 MR: 1159	EENT: 2033 SS: 1941 MS: 0121	BMNT: 0643 SR: 0735 MR: 1248	EENT: 2034 SS: 1942 MS: 0209	BMNT: 0642 SR: 0734 MR: 1340	EENT: 2035 SS: 1943 MS: 0255	BMNT: 0641 SR: 0733 MR: 1433	EENT: 2036 SS: 1943 MS: 0337	BMNT: 0639 SR: 0732 MR: 1528
	ILLUM DATA	DARK PERIOD: 5:24	MOON PERIOD: 1:21 / 3:27	DARK PERIOD: 4:34	MOON PERIOD: 2:09 / 3:26	DARK PERIOD: 3:47	MOON PERIOD: 2:55 / 3:25	DARK PERIOD: 3:04	MOON PERIOD: 3:37 / 3:24	DARK PERIOD: 2:22

FORECASTER : 3 WS

W - Wind TU - Turbulence TS - Thunderstorms T - Temperature C - Ceiling P - Precipitation V - Visibility RH - Rel. Humidity

FOR OFFICIAL USE ONLY

FOR PLANNING PURPOSES ONLY

Integrity - Service - Excellence



III ARMORED CORPS



PHANTOM

5-Day Forecast Impacts

WEATHER IMPACTS ON OPERATIONS

OPERATION	FOR OFFICIAL USE		
	FAVORABLE (No Degradation)	MARGINAL (Some Degradation)	UNFAVORABLE (Significant Degradation)
HELO	CIG \geq 1000 FT	CIG 500 - 999 FT	CIG $<$ 500 FT
	VIS \geq 4800 METERS	VIS 0800 - 4799 METERS	VIS $<$ 0800 METERS
	WIND $<$ 35 KTS	WIND 35 - 44 KTS	WIND \geq 45 KTS
			LGT OR MDT OR SVR TSTM
			LGT OR MDT OR HVY FZ PRECIP
		MDT TURB	SVR TURB
		LGT OR MDT ICING	SVR ICING
UAS	CIG \geq 3000 FT		CIG $<$ 3000 FT
	VIS \geq 4800 METERS		VIS $<$ 4800 METERS
	WIND $<$ 25 KTS		WIND \geq 25 KTS
		LGT OR MDT PRECIP	HVY PRECIP
			LGT OR MDT OR SVR TSTM
			LGT OR MDT OR HVY FZ PRECIP
		LGT TURBC	MDT OR SVR TURBC
			LGT OR MDT OR SVR ICING
PERSONNEL	TEMP 33 - 84 F	TEMP $<$ 33 F	TEMP \leq -25 F
		TEMP \geq 85 F	TEMP \geq 95 F
	LGT PRECIP	MDT PRECIP	HVY PRECIP
			LGT OR MDT OR SVR TSTM
VEHICLES	LGT PRECIP	MDT PRECIP	HEAVY PRECIP
		LGT FZ PRECIP	MDT OR HVY FZ PRECIP
	TEMP 01 - 104 F	TEMP $<$ 1 F	
		TEMP $>$ 104 F	
VIS SYSTEMS	VIS \geq 3200 METERS	VIS 1000 - 3199 METERS	VIS $<$ 1000 METERS
	LGT PRECIP	MDT PRECIP	HVY PRECIP
	TEMP $<$ 100 F	TEMP \geq 100 F	
	REL HUMIDITY $<$ 80%	TEMP $<$ -25 F	
		REL HUMIDITY \geq 80%	
IR SENSORS	VIS \geq 3200 METERS	VIS $<$ 3200 METERS	
	LGT PRECIP	MDT PRECIP	HVY PRECIP
	TEMP 20 - 125 F		TEMP $>$ 125 F
	REL HUMIDITY $<$ 80%		TEMP $<$ -25 F
			REL HUMIDITY \geq 80%



FHR115-1



Forecast Performance Metrics



- ➡ How well are we forecasting mission impacting weather?
- ➡ **Best measure of our performance is direct feedback from aircrews:**
 - ➡ Click on “Feedback Icon” on flimsy; send an E-mail
 - ➡ Complete Flight Weather Briefing Feedback Form on our webpage or faxed with all DD175-1s
 - ➡ Call 3 WS/DOV 288-4259
- ➡ We’ll take good and bad comments!!!





Monthly Performance Metrics



☞ Check out our monthly performance reports on our web site: www.hood.army.mil/3ws/MEFVERFeedback.ppt



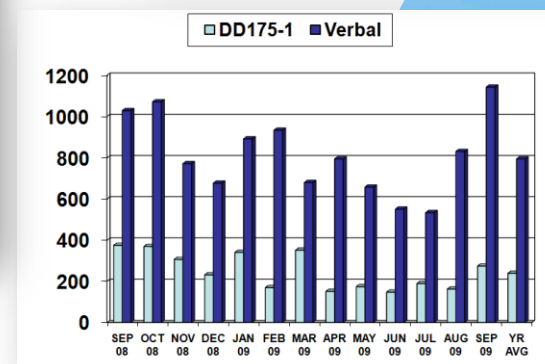
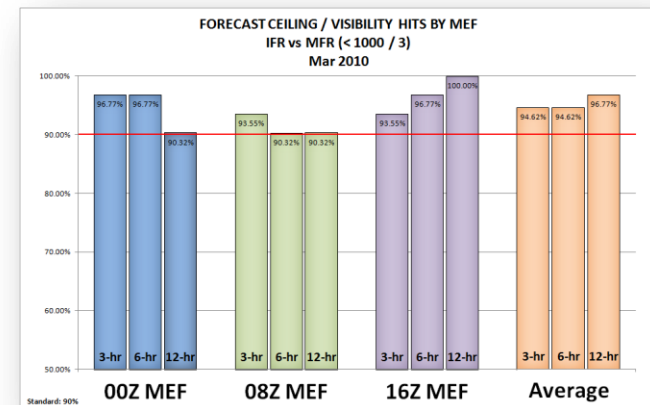
3^d Weather Squadron

Integrity - Service - Excellence

FORECAST PERFORMANCE METRICS



RGAAF Weather Station
February 2012





Objective Verification



☞ In addition to direct feedback we employ an objective method to measure (verify) our forecast performance:

☞ We selected three key operational parameters:

☞ **Ceiling / Visibility < 1000 feet / 3 miles (IFR)**

☞ **Ceiling / Visibility < 500 feet / 1/2 mile (HLR Airfield Minimums)**

☞ **Thunderstorms**

☞ We measure the accuracy of each Fort Hood Reservation Forecast (Flimsy) published on the 3 WS web page

☞ We use observations at GRK, HLR, and GOP (Gatesville) and any PIREPs to verify each flimsy at the 3-, 6-, and 12-hour point from the original issuance time





Did the Forecast or Weather Impact the Mission?



- ☞ Did we forecast **“GO”** weather for your mission and weather was a **“GO”** -- mission completed
- ☞ Did we forecast **“GO”** weather for your mission and weather was a **“NO GO”** -- mission cancelled or changed due to un-forecast weather
- ☞ Did we forecast **“NO GO”** weather for your mission and weather was **“GO”**-- mission cancelled or changed due to forecast (*lost opportunity or needless change*)
- ☞ Did we forecast **“NO GO”** weather for your mission and weather was **“NO GO”** -- mission cancelled or changed due to forecast/weather (*if inserted early in planning process this situation can prevent wasted time and enhance planning process*)





POCs



- 3 WS Commander: **288-1313**
- 3 WS Operations Officer: **287-7397**
- Operations Superintendent: **287-2960**
- RGAAF Weather Station: **288-9620/9400**
- RGAAF Weather Station NCOIC **288-9166**
- Integration Flight (SWOs) **288-4326/4255**

Gray METRO: UHF 306.5





SUMMARY



- ➡ Local Area Influences
- ➡ Summer Climatology
- ➡ Hazards
- ➡ Training Areas
- ➡ Watches/Warnings/Advisories
- ➡ Weather Operations
- ➡ POCs



THE END



Any question or comments?

